SECDEF Speaks at NDU Joint Operations Symposium — QDR Conference

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Editor's Note: The following text presents Secretary of Defense William S. Cohen's remarks at the National Defense University (NDU) Joint Operations Symposium – QDR Conference. Cohen's speech focused on what he calls an ongoing and future "Revolution in Military Affairs" or RMA, which he believes must be accompanied by a "Revolution in the Business Affairs" of DoD. *Program Manager* is pleased to publish his remarks in their entirety.

The past two weeks Shakespeare's *Henry V* has been playing at the Carter Barron Amphitheater here in Washington. The play depicts one of the most famous battles in military history. It is the Battle of Agincourt, where some 6,000 English common soldiers defeated a French army of armored noble knights at least four times in size.

With imaginative leadership and tactics, the English enticed the French into a frontal attack. As the slow-moving knights waded through ankle-deep mud in their heavy armor, they were cut down by English longbow archers on their flanks. By the time their depleted numbers reached the English lines, they were easy victims to English yeoman using axes and swords.

It was a crushing blow to the age of the armored knight and feudal warfare. It was one of a series of battles in that era that signaled a revolution in the way armies fought, maneuvered, and organized themselves.

Revolution in Military Affairs

I felt the early rumblings of another revolution in military affairs in March, when I went out to Fort Irwin in California to see the Army's Force XXI experiments, applying digital technology to modern land warfare. I saw soldiers with satellite navigation sets in their backpacks; and M-16s in their hands equipped with thermal sensors, laser rangefinders and image-intensifiers. They drove Humvees with computer screens bolted to the dashboards showing troop locations across an area the size of Rhode Island. And they were linked to their commanders and war planners with a kind of battlefield Internet that gave them all a clear, common, real-time picture of the battlefield, vastly reducing the fog of war.

It was clear to me that just as the longbow, the pike, and gunpowder eventually forced the armored knight from the field, so are we now witnessing the triumph of the microchip in warfare, transforming it in ways we are only beginning to comprehend.

I sensed an urgency: an urgency to get this technology into the force; to experiment with it so we understand its implications; and to develop the operational concepts, doctrine, and tactics to take full advantage of it.

I also recognized the reality that it is going to be difficult to seize that future I saw at Ft. Irwin, while at the same time sustaining our present forces, missions, and military superiority. That was the great contribution of the Quadrennial Defense Review: to give us a realistic plan to reach this visionary goal, not only to modernize the force – which implies **evolutionary** change – but also to foment **revolutionary** change to take our forces well into the future.

Twenty years ago, Alvin Toffler warned that, "unless you tame technology, you will encounter future shock." We want to harness technology for defense so that it is our enemies who suffer "future shock," while we gain "future security." To do so, we must take specific steps to harness the Revolution in Military Affairs and begin to build the future force today.

Joint Vision 2010

Out to the mid-term future, the initial template for our future force will be "Joint Vision 2010." It is built on an integrated "system of systems" that aims to give our forces total battlespace awareness, as well as the capability to maneuver and engage the enemy at the times and places of our choosing throughout the entire battlespace. This system of systems will integrate the laptop, the microchip, the microwave, the videocam, the satellite,

and the sensor. It will connect the cockpit, the quarterdeck, the control panel, and the command post; and link the shooter, to the commander, to the supplier.

It will aim to collect and distribute a steady flow of information to U.S. forces throughout the battlespace, while denying the enemy the ability to do the same.

- With a full picture of the battlespace, advanced weapons, and agile organizations, U.S. forces will be able to attack enemy weak points throughout the depth and breadth of the battlefield – summed up by the phrase *dominant maneuver*.

- They will also have *precision engagement* – the ability to precisely deliver the desired effects at the right time and place on any target.

- They will be supported by *focused logistics* – the ability to deliver the right supplies at the right time and place on the battlefield.

- And they will have *full dimension* protection – multiple layers of protection against a full spectrum of threats, from ballistic missiles to germ warfare, giving them greater freedom of action in all phases of combat.

What these four capabilities mean is that our forces will deploy lighter. They will need fewer weapons platforms and fewer munitions. They will be able to direct both lethal and nonlethal fire to the right targets. There will be less collateral damage, less friendly fire, and fewer U.S. and allied casualties. U.S. forces will be able to descend on the scene early in a conflict, take the initiative away from a numerically superior foe – getting inside his decision cycle – and end the battle quickly on our terms.

These capabilities are not drawn from the "X-Files" or the Starship Enterprise. Right now, soldiers, sailors, airmen and Marines are conducting research, experiments, and exercises to make them a reality. It's not just the Army and Force XXI. It's also Air Force Battle Labs exploring operational concepts in cyberspace and outer space. And it's the Navy and Marine's Fleet Battle and Sea Dragon Experiments.

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This year at 29 Palms and Camp Pendleton, the Marines conducted the Hunter Warrior Experiment. It showed us how lightly armed units can dominate large coastal regions, not by landing on the beaches, but by leaping over them in V-22s, spreading out and operating deep inside enemy territory. They used hand-held Apple Newton computers to send out hard-to-detect digital bursts to call in long-range, precision firepower from ships, choppers, fighters, and other military assets.

The Navy, meanwhile, was offshore holding Fleet Battle Experiment Alpha. They looked at how to provide fire support to the Hunter Warrior teams from carriers, surface combatant ships, and even arsenal ships. Overall, the experiments showed that such a force may be able to not only prevail against a much heavier, numerically superior enemy force – but to dominate it. In fact, one of the Marines' alternate titles for Hunter Warrior is "Agincourt Update."

The Navy is also starting to link its ships together with a system called Cooperative Engagement Capability – CEC. CEC gives all battle group elements a common, tactical, real-time picture of the battlespace. When an enemy aircraft or missile threatens any one of them, they all see it and track it in real-time. Then, whoever is in the best position can knock it out of the sky while others can hold their fire. It also allows ships to operate in spread-out formations, presenting a more difficult target.

CEC is part of a move to what the Joint Staff calls "network-centric" warfare, and it is not pie-in-the-sky. Last week, in Bahrain, I was aboard the U.S.S. *Fitzgerald*, an Aegis destroyer that has been conducting exercises to prepare for the fielding of CEC capabilities.

These experiments and technologies are pointing the way to a force that in the mid-term – five to 10 years from now – will have much greater capabilities. And this has important implications for our force structure. Heavy army divisions are going to be leaner. Carrier battle groups are going to be smaller. As the Air Force acquires better, more capable platforms, our tactical fighter force structure can be reduced.

These are not merely ideas. I am already making decisions based upon the Services' plans to adjust force structure as the forces' capabilities grow. Earlier this month, I approved the Army off-site plan, which proposed

restructuring that will markedly reduce men and equipment in some Guard divisions as they acquire greater capabilities. And during the QDR, the CNO proposed — and I accepted — his plans to reduce the number of ships in battle groups to reflect the enhanced capabilities being introduced into the fleet.

Pursuing the Revolution

But this is only a glimpse into the future. Today's experiments, technologies, and concepts are not the culmination of the Revolution in Military Affairs, but the beginning. They are the gathering of the pitchforks, Thomas Paine sharpening his pen, and the early rumblings of a revolution that will bring us a true transformation in long-term capability 15 to 25 years from now.

The Army is already developing a vision for the Army After Next through a series of wargames going on at Carlisle. They are looking at a leaner, more versatile, lethal, and deployable force that will be able to operate so fast and so far inside enemy lines that the term "front line" will become an anachronism.

Starting in September, the Marines will begin a series of experiments to understand how to fight in future urban coastal regions — where 75 percent of the world's people will live by the year 2020. They are looking at: What kind of information architecture does the dense urban battlefield require? What kind of *nonlethal* capability will we need? And how can we develop an advanced, forward sea-basing capability so we do not have to fight for beaches just to move a mountain of supplies ashore?

The Air Force is committed to reshaping itself from an Air Force to an Air and Space Force and — someday — to a Space and Air Force. The Air Force is also talking about adding a third version of the Joint Strike Fighter. The conventional and vertical take-off versions are already on the drawing board. The third version would be *unmanned* — taking us into an entirely new era of air warfare.

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What we must keep in mind is that we do not and cannot know the end-state of this revolution, or even the course the revolution will follow. During the French Revolution, at height of the Terror, as Danton was being carted off to the guillotine, he shouted out, "You will follow us, Robespierre!" Inside of three months, he was proved right. But Robespierre was oblivious to the direction of events.

As architects of our own revolution, we have to reach out to the future with open eyes and open minds — daring to experiment and ready to switch courses based on what we discover. The technology, weapon, or doctrine that looks like the sure-fire path to the future today may be overtaken and obsolete in five, 10, or 15 years as the revolution unfolds. This also argues for a focused modernization plan that provides us the flexibility to pursue different paths in the future rather than committing too far, too early — leaping before we look.

The second important thing to keep in mind as we pursue this revolution is that history shows that most critical aspect of profound military innovation is not technology, but understanding what we can do with it. The primary, important military technologies are increasingly widely available. The key to success is developing innovative operational concepts, doctrine, and organizations that can best exploit these technologies.

Look back at the 1920s and '30s — a period of fertile military innovation and experimentation that dictated the eventual course of World War II.

The British and the French knew how to make a good tank. But it was the Germans who blitzkrieg'd across Europe using the concept of combined arms maneuver, putting together the latest capabilities of tanks, aircraft, radios, infantry, and logistics.

Britain's fighter air defenses — which bested the numerically superior Luftwaffe in 1940 — relied on radar, but they relied even more on advanced communications and centralized command and control.

And in the Pacific, the United States leapt ahead in developing amphibious and carrier-based warfare, not so much because of the quality of our ships, but because we understood how to use them, how to move soldiers and Marines ashore, how to put more planes on decks, and how to increase sortie rates.

All of these eventual outcomes were the product of warfighting experiments in the 1920s and '30s.

This historical analogy underscores not only the importance of doctrine, but also the importance of guarding against complacency. We must not, in our hubris, assume that we will be the sole vanguards of the new Revolution in Military Affairs.

Periods of revolution are inherently unstable, allowing unsuspected actors — even relatively small powers — to

come in and hijack the revolution for their own ends if they make the right choices. It is important to remember that in 1941 Japan's GNP was only about 10 percent of the United States', but Japan did almost as well as the United States in developing concepts of carrier aviation, and held us to a stand-off in the Pacific for over two years.

Exploiting the Revolution

If we are to exploit the Revolution in Military Affairs, we too have to make the right choices. The first choice we have to make is how to balance our present needs with our need to build for the future. The QDR looked at three different options in this regard.

- The first option was to focus on current dangers. Under this option we would maintain the current force structure, exercise it at a high rate, and repeatedly delay the increase in procurement spending that will allow us to exploit the RMA [Revolution in Military Affairs]. This was essentially business as usual, and the QDR rejected business as usual.

- The second option was to seek to rapidly and radically restructure the force for the future. You could call this the Jacobin option, where we say "off with their heads," making dramatic cuts to the force to pay for a more aggressive pursuit of the revolution. This was surely the boldest course, but, I am convinced, not the best. Not only would it have seriously constrained our ability to shape the security environment by reducing our force presence overseas, but it would put our troops at greater risk in the near- and mid-term.

  Moreover, it is not even clear that this option was the best path to realizing the RMA. We need the intellectual firepower of our officers and senior enlisted corps to develop the operational concepts and doctrine that will make the RMA a reality. If we gut today's force, we are going to have a hard time keeping that intellectual firepower in uniform.

  And we would end up making premature decisions about technologies, operational concepts, and force structure before we have in hand the necessary information from our warfighting experiments, leading us to pour vast sums into conceptual cul-de-sacs.

- The option we chose — option three — strikes the necessary balance between the needs and risks of today, with those of the future.

  It pays for a focused modernization plan to deploy advanced systems at the right pace, accelerating some new programs and slowing down others, depending on how mature the technology is. And we have reduced the size of some programs, because their advanced capabilities mean that fewer are needed. This focused plan also gives us the time to conduct our warfighting experiments the right way, which recognizes that success depends upon the freedom to fail; to test out many revolutionary concepts knowing that some will be a bust while others will succeed.

Paying for the Revolution

To pay for this modernization, we made modest reductions in force structure, focused on the tail, not the tooth. This will enable us to continue to meet current threats and shape the security environment at an historical moment of great flux.

We also reached a central conclusion of the review: that the only way to pay for a continuing Revolution in Military Affairs was to also have a "Revolution in the Business Affairs" of DoD to slough off the excess weight we still carry from the long winter of the Cold War.

We need to be like a decathlon athlete — fast, agile, and able to do many things well. And if we continue to carry around our excess weight, we will not be able to jump as high nor run as fast or as far as we must. That is why we have gone to Congress to ask for two more rounds of BRAC and the ability to outsource more depot maintenance work. And that is why I have appointed a Defense Reform Task Force, which will be overseen by DoD Comptroller John Hamre, to advise me on further ways we can restructure, consolidate, and reengineer the Department.

Taking the Right Road

The end result is a plan that will take us safely from the present to the future.

It will allow us to exploit the Revolution in Military Affairs in a focused, balanced, and realistic way. It will buy us the new hardware and capabilities we need to maintain our military superiority for the near- and mid-term. But it also takes us out beyond the mid-term, where the true revolution lies.

It challenges our best minds to look beyond the horizon to imagine new ways of doing things. It challenges our Department to slim down and shape up. And it challenges our nation to move seamlessly from being the dominant power in one era and one century, to being the dominant power in a new era and a new century.

History has given us the choice; science has given us the chance; love of country gives us the duty — to reach out to this future and pull it toward us. Now we must summon the courage to let go of the past. For as Dag Hammarskjold said: "Only he who keeps his eye fixed on the far horizon will find his right road."